AMENDMENTS TO THE CLAIMS:

Please cancel claim 4, without prejudice, and amend claims 1 and 3 as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (currently amended): A blood flow visualizing diagnostic apparatus characterized by having:

an ultrasonic measurement unit which emits an ultrasonic signal toward a blood vessel inside a human body to receive ~~the~~ a reflected ultrasonic signal;

an analysis processing unit which obtains a blood vessel shape and a blood flow velocity in the blood vessel by the received signal;

a simulation unit which sets computational lattices on the basis of the blood vessel shape obtained by said analysis processing unit to simulate the blood flow velocity and a pressure distribution;

a feedback unit which computes an error between the blood flow velocity obtained by said analysis processing unit and the blood flow velocity obtained by said simulation unit and feeds back the error to a ~~sufficiently large~~ number of representative points which are distributed over ~~the~~ a blood flow domain in said computational lattices of said simulation unit,

wherein the error is computed as a difference between a component in the ultrasonic beam direction of the blood flow velocity vector obtained by said simulation unit and a corresponding component in the ultrasonic beam direction of the blood flow velocity vector obtained by said analysis processing unit; and

a display unit which displays the blood flow velocity and the pressure distribution output from said simulation unit after the feedback.

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Claim 2 (cancelled)

Claim 3 (currently amended): The blood flow visualizing diagnostic apparatus as claimed in claim 1, wherein a difference ~~a body force f (vector) used~~ in [[the]] actual feedback is a blood flow force f (vector) in the Navier-Stokes equation expressed by the following equation:

$$\mathbf{f} = -K\{(\mathbf{u}_c \circ \mathbf{u}_m / |\mathbf{u}_m|^2) - 1\}\ \mathbf{u}_m$$

where the vector $\mathbf{u}_c$ is the blood flow velocity vector $[u_o, v_c, w_c,]$ obtained by said simulation unit, the vector u_m is the blood flow velocity vector $[u_m, v_m, w_m]$ in the ultrasonic beam direction obtained by said analysis processing unit, $\mathbf{u}_c \circ \mathbf{u}_m / |\mathbf{u}_m|^2$ is a projection of u_c in the ultrasonic beam direction normalized with $|\mathbf{u}_m|$, and K is a gain of the feedback.

Claim 4 (cancelled)

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